DOCUMENT RESUME

ED 252 988 EC 171 321

AUTHOR Mullen, Yvonne
TITLE A Psychologist Looks at Mainstreaming.
PUB DATE Jun 84
NOTE 14p.; Paper presented at the International Convention of the Alexander Graham Bell Association (Portland, OR, June 26-30, 1984).
PUB TYPE Speeches/Conference Papers (150) -- Viewpoints (120) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Elementary Secondary Education; *Hearing Impairments; *Mainstreaming; *Student Placement; *Success

ABSTRACT

It is noted that mainstreaming has been equated with criterion for success of handicapped children despite the fact that some children are best served by more specialized educational placements. With specific attention to hearing impaired students, factors involved in successful mainstream placement are considered. Research on six student variables (audiological factors, communication skills, intelligence, achievement, personality and age factors) and five environmental variables (classroom teacher's skills and attitudes, administrative support, direct support services, physical environment, and family support) is reviewed. Guidelines are suggested regarding placement in the following settings: full integration, special classes, and special schools. It is concluded that the relative restrictiveness of a placement lies not in the setting itself, but in the closeness of the match between programing and student needs. (CL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED252988

A PSYCHOLOGIST LOOKS AT MAINSTREAMING

Presented at the
Alexander Graham Bell Association International Convention
Portland, Oregon
on
June 28, 1984

By
Yvonne Mullen
Director, Psychology Division
Clarke School for the Deaf
Northampton, Massachusetts

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Yvonne Mullen
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EC171321

A PSYCHOLOGIST LOOKS AT MAINSTREAMING

INTRODUCTION

With the passage of P.L. 94-142 has come tremendous enthusiasm for the mainstreaming of handicapped children into regular classrooms. It is perhaps unfortunate that the concept of "least restrictive environment" contained in P.L. 94-142 has, for many, led to a view of mainstreaming as the primary goal in the education of a handicapped child. When mainstreaming is viewed as a goal rather than a process, it becomes the criterion used to measure success. Too often, in the milieu of todays' prevailing values, parents may come to see their child's placement in the "mainstream" as the only reliable indication of success. Placement in a more specialized setting may be viewed as failure.

However, not all children are candidates for full integration. P.L. 94-142 in fact specifies that there must be a continuum of alternative placements available to provide for the individual needs of each handicapped child as determined by their individualized educational plan. This includes options ranging from full and part-time mainstream placements all the way to substantially separate special programs. Thus, at least in principle, it is acknowledged that while some handicapped children will benefit from mainstreaming, others will be served best by more specialized educational placements.

Physical placement in a regular classroom by no means guarantees a hearing-impaired child academic or even social integration. In order to successfully meet the challenge of a mainstream placement the hearing-impaired child must presumably have the necessary skills to deal with it effectively. In short, the child must be "ready".

Those of us who serve the needs of hearing-impaired students therefore need to be well informed on the important issues related to mainstream placement decisions. On what basis do we determine a hearing-impaired child's readiness for an integrated placement? What factors are related to the academic and social success of hearing-impaired children in mainstream educational settings? What are the issues involved in the assessment of these factors? Then, how do we utilize this information to determine the most appropriate placement for a particular hearing-impaired child? This paper will address these important questions.

FACTORS RELATED TO "SUCCESS" IN THE MAINSTREAM

Successful mainstreaming is an interactional process. It is the interaction of an individual child, with his/her own unique set of characteristics, and a particular environment, which also has unique characteristics. Theoretically, one may look at these variables in isolation and come to a better understanding of what goes into the process of successful mainstreaming. However, it must be understood that, in practice, the chemistry comes only with the combined interaction. This portion of the paper presents a description of those variables which have been most frequently cited in the literature as related to a hearing-impaired child's successful integration into a mainstream setting. It explores variables related to the individual child as well as environmental factors which are believed to be of some significance.

In reviewing the literature related to the topic of mainstreaming hearing-imapired children, one quickly discovers that there is no shortage of opinion on the subject. Many books and articles have been published in the past ten years which discuss factors believed to be significant to the successful integration of hearing-impaired students into regular classroom settings. However, it is important to be aware that much of what has been written on this subject is based solely on "expert" opinion and professional experience rather than empirical research. While position papers are plentiful, data based research studies are few and far between. But let us look at what the experts have to say about what factors need to be considered.

STUDENT VARIABLES

Audiological Factors

Given the significant relationship previously demonstrated in the research literature between degree of hearing loss and variables such as communication skills and academic achievement (Jensema, 1975; Jensema et al, 1978; Karchmer el al, 1979; Trybus et al, 1977) it is not surprising to find degree of hearing loss cited frequently as a significant factor in considering a mainstream pleacement. However, many authors are careful to differentiate between the hearing loss itself, as measured audiometrically, and functional degree of disability. According to a study by Reich et al (1977) "the prime requisite for successful integration is not a certain level of residual hearing per se, but the student's ability to comprehend speech" (p. 541-542). Obviously, the more hearing a child has, the easier this task becomes. However, the above study found a number of severely and profoundly deaf students in their population sample who, given adequate support, had apparently developed the necessary skills to achieve some measure of success within mainstream placements. Thus, when considering a regular classroom placement, our criterion for the measurement of auditory functioning should probably focus on the child's communication behavior and use of residual hearing rather than on pure tone audiometry.

Communication Skills

Few would take issue with the importance of effective communication skills as a prerequisite to a successful mainstream placement. However, different aspects of the communication process are often given different emphasis by the various authorities in the field.

Many experts have stressed the capacity for oral communication, the child's ability to speak intelligibly and to comprehend spoken language (Connor, 1976; Nix, 1976; Ross, 1976; Simmons - Martin, 1976). Two research studies which have tried to identify factors related to successful mainstreaming of hearing-impaired children seem to strongly support this view. Reich et al (1977) looked at a sample of 159 hearing-imapired students in three types of integrated programs: full integration, integration with itinerant support, and partial integration. Their findings indicated that, regardless of program type or degree of hearing loss, hearing-impaired students must have highly developed oral skills to be successfully mainstreamed. Pflaster (1980) generated a factor analysis of variables related to the academic performance of 182 hearing-impaired students in regular classroom placements. Consistent with the Reich et al study, cited above, oral communication was again identified as the most outstanding factor

related to the academic performance of hearing-impaired students integrated into regular classrooms. Each of these research studies evaluated oral communication skills by means of teacher ratings.

Some suggest that, for the child fluent in sign language, interpreter services in the classroom might be used to compensate for weak oral skills, (Hinkle & White, 1979) and still allow for successful integration. In reviewing the literature on mainstreaming hearing-impaired children at the primary and secondary levels, this author found no data based research that would either directly support or refute this view.

Greater concensus appears to exist around the importance of the hearing-impaired child's general level of language development for successful mainstreaming. Pflaster's research (1980) again supports this belief, identifying language competence as another important factor in the academic success of hearing-impaired students in regular classroom placements.

It seems clear that communication skills are a vital factor to be assessed when considering a mainstream placement for a hearing-impaired child. But, it is also important to be aware that the actual diagnostic tools available for the objective measurement of performance in this critical area are scarce. Most of the language tests which do exist were developed on hearing populations and thus have many drawbacks in their usage and interpretation with the hearing-impaired. It is encouraging that in the past few years a small number of tests have been developed which attempt to address some of these long standing needs for appropriate assessment tools for use with the hearing impaired [i.e.: Test of Auditory Comprehension (TAC, 1976); Grammatical Analysis of Elicited Language (Moog & Geers, 1979); Test of Syntactic Abilities (Quigley et al, 1978)]. However, each of these instruments is a relatively recent addition to the field of assessment and has yet to achieve widespread usage. Each will need to withstand the tests of time (and hopefully validating research) in demonstrating its usefulness and application beyond the population samples upon which each was originally developed.

Intelligence

It has often been suggested that the child's intelligence level is an important factor to be considered in making a mainstream placement (Connor, 1976; Nix, 1976: Yater, 1977). Given the obvious relationship between intelligence and achievement it is not surprising that Reich et al (1977) in fact found having "at least average intelligence" to be a significant variable when comparing the successful to unsuccessful students in their research samples of mainstreamed hearing impaired.

Here again, there are some important issues to be considered with regard to assessment. Experienced evaluators of the deaf have long recognized that the most valid assessment of a deaf individual's potential will be obtained from nonverbal performance measures of intelligence (Brill, 1962; Lane & Schneider, 1941; Levine, 1960; Sullivan & Vernon, 1979; Vernon, 1976; Vernon & Brown, 1964). Verbal intelligence tests are believed more likely to reflect the hearing-impaired child's language difficulty rather than intelligence and thus produce a spuriously low estimate of the child's ability. However, when considering a mainstream placement, a number of the "experts" advocate an assessment of both the child's verbal and performance capabilities (Kretchmer

& Quigley, 1981; Simmons-Martin, 1976; Yater, 1977). Given that most academic subjects involve the use of verbal symbols, verbal scores may be useful in assessing the hearing-imapired child's ability to compete verbally with hearing peers in a mainstream setting. It should be emphasized however, that these scores are best treated as verbal achievement scores. While they may be highly correlated with academic acheivement, they do not provide a valid measure of the hearing-impaired child's intellectual potential.

Achievement

Previous academic achievement provides another important measure of a student's ability to learn, and obviously needs to be considered before making a mainstream placement. According to Yater (1977) "Achievement test scores.....provide a good indication of the probable grade level at which a student might function successfully" (p.44). How much of a discrepancy can be accommodated successfully within a regular classroom setting will probably depend on such factors as the level of individualization in classroom instruction, the range of ability levels represented within the class and the amount and types of support services available to the child and/or teacher.

Though the different standardized achievement tests reportedly have various pros and cons in their usage with hearing-impaired students, Hinkle & White (1979) have suggested that the "best test" is usually the one which has been administered in each of the other programs being considered for placement. This allows for a more meaningful comparision of the hearing-impaired child with his/her potential classmates.

Personality Factors

Some "experts" have made reference to social/emotional maturity as a positive indicator in considering a mainstream placement (Golf, 1976; Motto, 1963; Simmons-Martin, 1976; Worthington, 1958). Others emphasize the student's intrinsic level of motivation (Frigo, 1967; Healey, 1977; Hinkle & White, 1979). Obviously, these factors would seem to be related to a student's achievement regardless of placement. Pflaster's (1980) previously cited factor analysis of variables related to the academic performance of hearing-impaired students in regular class placements reported the contribution of "personality factors" (i.e.: achievement motivation, social maturity, self-image, independence, interpersonal relationships, etc.) to be second only to the quality of their oral communication ability.

But again, there are critical issues to be considered in assessment. Experienced professionals in the field have long cautioned against the use of personality tests in the evaluation of the deaf (Levine, 1960; Moores, 1978; Sullivan & Vernon, 1979; Vernon & Brown, 1964). These tests generally require extensive verbal interaction or reading skills which are likely to be adversely affected by the hearing-impaired child's more limited language level. The results of such measures must therefore be considered of questionable validity when utilized with this population, particularly when administered by individuals with limited experience in working with the hearing impaired. Behavioral observations and behavior rating scales [i.e.: The Meadow/Kendall Social-Emotional Assessment Inventory for Deaf Students (Meadow, 1980)] may provide a more reliable picture of a hearing-impaired student's personal/social functioning than formal test results.

Age Factors

A number of authors also raise the issue of the child's age as a factor to be considered in the process of a successful mainstream placement. Some argue that hearing-impaired children should be integrated as soon as possible (Green, 1976; Yater, 1977). Others, however, raise cautions that hearing-impaired children integrated at the kindergarten or first grade level may start out ahead of hearing peers because of early exposure to readiness skills, but unless carefully monitored, may quickly fall behind by the third or fourth grade as the language tasks become more complex (Frick, 1973; Ross, 1978). Indeed, studies of integrated hearing-impaired students by Davis (1974) and Davis et al (1981) both suggest that, at least for those with hearing losses exceeding 50 dB, educational deficits may be cumulative in nature, increasing in severity across time.

Authors specifically addressing mainstreaming at the secondary level often give particularly strong emphasis to the social/emotional issues, in adddition to reiterating the academic ones (Hedgecock, 1974; Kindred, 1980; Matter, 1976). Each cite the availability of some form of supportive counseling as important to the hearing-impaired student's success in a mainstream placement at this age level. Results of studies by Reich et al (1977); Sarfaty and Katz (1978), and Farrugia and Austin (1980) would all seem to support this concern by raising questions about the personal and social adjustment of integrated hearing-impaired students during the adolescent years.

ENVIRONMENTAL VARIABLES

Classroom Teacher

The classroom teachers' skills and attitudes are often cited as critical environmental factors to be considered in making mainstream placement decisions. Yater (1977) points out that, for the most part, it is the classroom teacher who must make the necessary modifications in classroom teaching methods to benefit the hearing-impaired child as well as the entire class, and create an environment where each student will be able to effectively participate. Pflaster's previously cited research (1980) does lend support to the consideration of this variable. "Teacher attitude" did indeed emerge as an extrinsic factor related to the academic performance of the 182 integrated hearing-impaired students included in her study. Ideally then, the regular classroom teacher should be part of the placement team and provide input into the decission making process. Placement of a hearing-impaired student into a regular classroom should be considered only with the teacher's prior knowledge and consent.

Administrative Support

However, it is not just the attitude of the classroom teacher which should be considered in the placement process. Many of the "experts" indicate that the attitude of the school adminisstration is also critical to the potential success of an integrated placement (Birch, 1975; De Salle and Ptasnik, 1976; Hinkle and White, 1979; Kindred, 1980; Motto, 1963; Yater, 1977). Hinkle and White (1979) point out that it is the administrators who set educational priorities and who make the decisions which, to a large extent, determine the reality of a school's commitment to the process of mainstreaming. Here too, Pflaster's research (1980) lends support to the

consideration of attitudenal variables. Administrator attitude also emerged as an extrinsic factor related to the academic performance of this sample of hearing-impaired students in regular class placements. (Pflaster assessed both teacher and administrator attitudes by means of questionaires).

Direct Support Services

Many authors stress the availability of a variety of specialist support services as a necessary component to a successful mainstream placement (Birch, 1975; Connor, 1976; Hedgecock, 1974; Hinkle and White, 1979; Kindred, 1980; Matter, 1976; Nix, 1976; Northcott, 1976; Rosen, 1980; Ross, 1976a; Vernon and Athey, 1977). Most frequently cited as potentially required for adequate monitoring of the placement and for providing any necessary additional supports are: audiological services, speech and language therapy, tutoring and/or resource support, notetaking, interpreting and counseling services. Some authorities also list continuing parent guidance, counseling and/or education as another important aspect to be included in the necessary direct support services package (Nix, 1976; Northcott, 1976; Ross, 1976a). However, in considering a mainstream placement, it is not only important to be concerned with the availability of such supports, but also with the training, credentialling and experience of the individuals providing them. Given the relatively low incidence amongst the general school aged population of severe prelingual hearing loss, it is not unusual for many of the professionals providing support services within a regular education setting to have little or no background in working with this select group. Ideally, ongoing support and/or in-service training should be provided by experienced teachers of the hearing impaired.

Physical Environment

The actual physical environment in the classroom is an additional factor to be considered in making a successful mainstream placement (Boothroyd et al, 1978; Hoversten and Fomby, 1981; Yater, 1977). Acoustic treatment, such as soundproofing and carpeting as well as a location away from traffic, will obviously be to the hearing-impaired child's advantage. The general noise level of the class also needs to be taken into consideration. Even the quality of lighting may have some influence on the hearing-impaired student's functioning.

Family Support

Many authors cite family variables as significant to a successful mainstream placement. Frequent reference has been made to the general importance of parental involvement or "support from the home" (Connor, 1976; Frigo, 1967; Golf, 1976; Healey, 1977; Nix, 1976; Northcott, 1976; Ross, 1976a; Simmons-Martin, 1976). Motto (1963) specifically emphasizes parental attitude toward school achievement as a factor relevant to the child's success. Research supports the importance of these family variables. Reich et al (1977) reported "having supportive parents" as an additional factor significant to successful mainstream placement in their research sample of integrated hearing impaired students. In Pflaster's (1980) previously cited research study, "parental acceptance", "parental attitude", and "parental expectations" all emerged as factors important to the academic performance of the integrated hearing impaired students included in her sample. In fact, the most significant of the environmental variables to emerge from this factor analysis was "sibling constellation" (i.e.: the number of children and the

hearing impaired child's place in the family). Pflaster interpreted this finding to suggest that smaller families allowed for greater parental involvement and support.

GUIDELINES FOR DIFFERENTIAL PLACEMENT

In spite of all that has been written about the issues involved in mainstreaming hearing-impaired children, actual placement decisions today continue to be frought with uncertainties. Much more research is needed to better determine realistic criteria for making appropriate differential placement decisions. However, for the present, the following guidelines are suggested for use in the placement process. They attempt to integrate the findings of the limited research presented to date in the literature. They are also generally consistent with this author's professional experience.

Full Integration (without additional support) is most appropriate for those students with a) at least average intelligence, b) well-developed oral communication skills both receptively and expressively, c) language development and academic achievement on or near grade level for class placement, d) a high level of personal motivation, and hopefully, e) accepting and supportive parents and teachers.

Itinerant Specialist Support is most appropriate for students with many of the same characteristics as those listed above, but who may have special needs for which the classroom teacher requires assistance (i.e.: methods, materials, equipment, etc.) or which go beyond the realm of regular class programming (i.e.: auditory management, speech therapy, etc.).

Partial Integration (resource room or part-time special class) is appropriate for those students a) of average ability, b) with oral communication skills adequate for functioning in a regular classroom, c) with a performance level gap relative to the regular class placement, d) who require additional support with one or more subject areas.

Special Classes are appropriate for those students a) whose communication skills limit active participation in a regular classroom, b) with more intensive and/or specialized needs which might still be realistically met by the resources available within the regular school environment. The feasibility of this option depends upon the resources of the school as well as on having several students with sufficiently similar needs to allow for appropriate grouping.

Special Schools are most appropriate for students who lack the oral communication skills, the solid language base and/or academic skills development to successfully compete in a more integrated placement. Special schools usually provide more options in programming for the needs of such students which might not be met as effectively in other settings (i.e.: intensive language and academic skills development, vocational training, specialized counseling support, programming for additional handicapping conditions, etc.). When a discrepancy exists between the student's age and performance level, a special school placement can often provide increased opportunity for appropriate peer group stimulation, competition, leadership experiences, etc., as well as a specialized setting within which to close the gap.

CONCLUSION

In making the actual placement decision it is critical that the team realistically consider the student's current level of functioning. At a time when mainstreaming is often viewed more as a goal than a process, the temptation may be great to place the child where one would like him/her to be, rather than where he/she is ready to be. Those making placement decisions can not afford to allow the current enthusiasm for integrated placements to blind them to the needs of the individual child.

The team must look to the whole child in making its placement decision. Garretson (1977) has argued that public schools are often naive in their understanding of the full implications of the hearing-impaired child's communication deficit. "Deaf children may well be islands in the mainstream, physically present but intellectually absent" (p.25). However, the danger of social isolation seems equally great, if not greater. These social issues may be overlooked in the haste to move towards more integrated placements. Arguments that the increased contact between deaf and hearing peers as a result of mainstreaming will lead to increased social interaction have not been substantiated by the research. It appears that placement alone is not enough. The child must first have the prerequisite skills to benefit from the opportunity the integrated placement provides.

Education is not an end in itself. Presumably, the goal for all students is somehow to develop a socially adjusted individual, with healthy self esteem, who is capable of becoming a contributing member of society. Ideally, every child deserves the opportunity to develop his/her full potential. For the deaf child this means providing an environment which will foster continued growth in communication abilities as well as in academic, vocational, and interpersonal skill areas. It also means providing a learning environment in which the child can actively participate and achieve some measure of success. The placement and programming most conducive to meeting these goals and stimulating maximum growth will differ for each student.

The current view of mainstreaming as a goal has often relegated special schools and substantially separate programs to positions at the "lower" end of the cascade of services, viewed by many as inherently "more restrictive" settings. However, the relative restrictiveness of a placement lies not in the setting itself, but in the closeness of the match between the programming provided and the needs of the individual child. No doubt, mainstreaming has many advantages for the hearing-impaired student who has the prerequisite skills. However, it is by no means a panacea. Inappropriate or premature mainstreaming seems likely to have long term detrimental effects, both academically and socially. For many students the special school or substantially separate program may indeed provide the "least restrictive" alternative. The decision will always need to be made in terms of the individual child.

SELECTED BIBLIOGRAPHY

Antia, S.D. "Social Interaction of Partially Mainstreamed Hearing-Impaired Children" American Annals of the Deaf, Feb. 1982, 18-25.

Birch, J.W. "Hearing Impaired Pupils in the Mainstream" Leadership Training Institute/Special Education, Council for Exceptional Children, 1975.

Boothroyd, A., Gatty, J., & Poland, N. "Mainstreaming and the Role of the Special School" Paper presented at the National Convention of the Alexander Graham Bell Association for the Deaf, St. Louis, June 1978.

Brackett, D. & Henniges, M. "Communication Interaction of Preschool Hearing Impaired Children in an Integrated Setting" Volta Review, 78, 1976, 276-285.

Brill, R.G. "The Relationship of Wechsler IQ's to Academic Achievement Amount Deaf Students" Exceptional Children, 28, 1962, 315.

Connor, L.E. "Administrative Concerns for Mainstreaming" in Nix (Ed.) Mainstream Education for Hearing Impaired Children and Youth, New York: Grune & Stratton, 1976.

Davis, J. "Performance of Young Hearing Impaired Children on a Test of Basic Concepts" Journal of Speech and Hearing Research, 17, 1974, 342-351.

Davis, J.; Shepard, N.; Stelmachowicz, P. & Gorga, M. "Characteristics of Hearing Impaired Children in the Public Schools: Part II - Psychoeducational Data" Journal of Speech and Hearing Disorders, 46, 1981, 130-137.

De Salle, J.M. & Ptasnik, J. "Some Problems and Solutions: High School Mainstreaming of the Hearing Impaired" American Annals of the Deaf, 121, 1976, 533-536.

Farrugia, D. & Austin, G. "A Study of Social-Emotional Adjustment Patterns of Hearing-Impaired Students in Different Educational Settings" American Annal of the Deaf, August 1980, 535-541.

Frick, E. "Adjusting to Integration: Some Difficulties Hearing Impaired Children have in Public Schools" Volta Review, January 1973, 36-46.

Frigo, M.P. "Criteria for Deaf Children in Regular Programs" Proceedings of the International Conference on Oral Education of the Deaf, Vol. 2, 1967, 2052-2065.

Garretson, M.D. "The Least Restrictive Environment" The Deaf American, 29 (a) 1977, 25.

Golf, H.R. "What Do You Do If the Mainstreamed Hearing Impaired Child Fails? or Mainstreaming: Sink or Swim" in Nix (Ed.) Mainstream Education for Hearing Impaired Children and Youth, New York: Grune & Stratton, 1976.

Green, R. "Psycho-Social Aspects of Mainstreaming for the Child and Family" in Nix (Ed.) Mainstream Education for Hearing Impaired Children, New York: Grune & Stratton, 1976.

Healey, W. (Foreword) in Yater, V. Mainstreaming of Children with a Hearing Loss: Practical Guidelines and Implications, Springfield, Illinois: Charles C. Thomas, 1977.

Hedgecock, D. "Facilitating Integration at the Junior High Level" Volta Review, March 1974, 182-188.

Hinkle, W. & White, K.R. "Assessment and Educational Placement" in Bishop (Ed.) Mainstreaming: Practical Ideas for Educating Hearing Impaired Students, Washington, D.C.: A.G. Bell Publications, 1979.

Hoversten, G.H. & Fomby, D. "Mainstreaming--The Controversy" in Roeser & Downs (Eds.) Auditory Disorders in School Children New York: Thieme-Stratton, Inc., 1981.

Jensema, C. The Relationship Between Academic Achievement and the Demographic Characteristics of Hearing Impaired Children and Youth, Series R, Number 2, Washington, D.C.: Gallaudet College, Office of Demographic Studies, 1975.

Jensema, C.J.; Karchmer, M.A. & Trybus, R.J. The Rated Speech Intelligibility of Hearing Impaired Children: Basic Relationships and a Detailed Analysis, Series R, Number 6, Washington, D.C.: Gaullaudet College, Office of Demographic Studies, 1978.

Jensema, C.J. & Trybus, R.J. Communication Patterns and Educational Achievement of Hearing Impaired Students, Series T, Number 2, Washington, D.C.: Gallaudet College, Office of Demographic Studies, 1978.

Karchmer, M.; Milone, J. & Wolk, S. "Educational Significance of Hearing Loss at Three Levels of Severity" American Annals of the Deaf, April 1979, 97-109.

Kindred, E.M. "Mainstream Teenagers with Care" American Annals of the Deaf, 125 (9), 1980, 1053-56.

Kretschmer, R.E. & Quigley, S.P. "The Psycho-Educational Assessment of Hearing-Impaired Children" in Roeser & Downs (Eds.) Auditory Disorders in School Children, New York: Thieme-Stratton, Inc., 1981.

Lane, H.S. & Schneider, J.L. "A Performance Test for School Age Deaf Children" American Annals of the Deaf, 86, 1941, 441-448.

Levine, E. Psychology of Deafness, New York: Columbia University Press, 1960.

Matter, G. "In the Current--With only One Oar" in Nix (Ed.) Mainstream Education for Hearing Impaired Children and Youth, New York: Grune & Stratton, 1976.

Meadow, K.P. Meadow/Kendall Social-Emotional Assessment Inventory for Deaf Students, Washington, D.C.: Gallaudet College, Pre-College Programs, 1980.

Moog, J.S. & Geers, A.E. Grammatical Analysis of Elicited Language, St. Louis: Central Institute for the Deaf, 1979.

Moores, D.F. Educating the Deaf: Psychology, Principles and Practices, Boston: Houghton Mifflin Co., 1978.

Motto, J. & Wawrzarzek, F. "Integration of Hearing Handicapped: Evaluation of Current Studies" Volta Review, 65, 1963, 124-129.

Nix, G.W. (Ed.) Mainstream Education for Hearing Impaired Children and Youth, New York: Grune & Stratton, 1976.

Northcott, W. "Mainstreaming the Preprimary Hearing Impaired Child 0-6: Practices....Progress....Problems" in Nix (Ed.) Mainstream Education for Hearing Impaired Children and Youth. New York: Frune & Stratton, 1976.

O'Connor, C.D. & Connor, L.E. "A Study of the Integration of Deaf Children in Regular Classrooms" Exceptional Children, 27, 1961, 483-486.

Pflaster, G. "A Factor Analysis of Variables Related to Academic Performance of Hearing Impaired Children in Regular Classes" Volta Review, 82 (2), 1980, 71-84.

Quigley, S.P.; Steinkamp, M.W. & Power, D.J. et al: Test of Syntactic Abilities, Beaverton: Dormac, Inc., 1978.

Reich, C.; Hambleton, D. & Houldin, B. "The Integration of Hearing Impaired Children in Regular Classrooms" American Annals of the Deaf, 122, 1977, 534-543.

Rosen, R. "Appropriate Educational Placement for Hearing Impaired Children" ERIC Clearinghouse on Handicapped and Gifted Children, Reston, Va.: Council for Exceptional Children, 1980.

Ross, M. "Model Educational Cascade for Hearing Impaired Children" in Nix (Ed.) Mainstream Education for Hearing Impaired Children and Youth, New York: Frune & Stratton, 1876a.

Ross, M "Assessment of the Hearing Impaired Prior to Mainstreaming" in Nix (Ed.) Mainstream Education for Hearing Impaired Children and Youth, New York: Frune & Stratton, 1976b.

Ross, M. "Mainstreaming: Some Social Considerations" Volta Review, 80 (1), 1978, 21-30.

Sarfaty, L. and Katz, S. "The Self-Concept of Adjustment Patterns of Hearing-Impaired Pupils in Different School Settings" American Annals of the Deaf, June 1978, 438-441.

Simmons-Martin, A. "CID Demonstration Home Program" in Nix (Ed.) Mainstreeam Education for Hearing Impaired Children and Youth, New York: Grune & Stratton, 1976.

Sullivan, P. & Vernon, M. "Psychological Assessment of Hearing Impaired Children" School Psychology Digest, 8 (3), 1979, 271-290.

Test of Auditory Comprehension, Office of Los Angeles County Superintendent of Schools, North Hollywood: Foreworks, 1976.

Trybus, R., & Karchmer, M. "School Achievement Scores of Hearing Impaired Children: National Data on Achievement Status and Growth Patterns" American Annals of the Deaf, 122, 1977, 62-69.

Vernon, M., & Athey, J. "The Holcomb Plan: A Creative Approach to Mainstreaming Deaf and Hard of Hearing Children" Instructor, January 1977, 136-137.

Vernon, M. "Psychologic Evaluation of Hearing Impaired Children" in Lloyd (Ed.) Communication, Assessment and Intervention Strategies, Baltimore: University Park Press, 1976.

Vernon, M. & Brown, D.W. "A Guide to Psychological Tests and Testing Procedures in the Evaluation of Deaf and Hard of Hearing Children: Journal of Speech and Hearing Disorders, 29 (4), 1964, 414-423.

Worthington, A.M. "Psychological Implication of Integration of Deaf Children with Hearing Children" American Annals of the Deaf, May 1958, 467-472.

Yater, V. Mainstreaming of Children with Hearing Loss: Practical Guidelines and Implications, Springfield, Illinois: Charles C. Thomas, 1977.